NHDES

The State of New Hampshire

Department of Environmental Services



Michael P. Nolin Commissioner

March 10, 2004 **Letter of Deficiency** DSP#04-017

Mill River Trust c/o Paul McEachern, Esquire Shaines & McEachern 25 Maplewood Avenue Portsmouth, NH 03802-0360

RE: Mill Pond Dam #204.01, Rochester

Dear Mr. McEachern Esquire:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on May 29, 2003. During this visual inspection and/or file review, the following deficiencies were observed:

- 1. There was brush and trees along both the right and left abutments of the dam and within 10 feet of the toe of the abutment walls;
- 2. Soil at the downstream toe of the left abutment wall had been eroded from past overtopping events which may be causing considerable reduction in the structural stability of the wall;
- 3. Steady seepage, 2-3gpm, was noted from the toe of the left concrete abutment wall at the junction of the discharge channel wall and the left concrete abutment wall;
- 4. Severe leakage was discharging from the remains of the old penstock at the left abutment of the dam:
- 5. The left concrete discharge channel wall, to the left of the penstock, had a section of concrete missing at the base of the wall and had a vertical crack at the junction of the discharge channel wall and the left concrete abutment wall;
- 6. The low level outlet is inoperable;
- 7. There is a buildup of sediment on the upstream face of the dam as illustrated in file photos dated June 1995;
- 8. Due to the high water over the spillway, the crest of the spillway was not closely examined. As a result of the file review, there is mention of the right end of the spillway being notched. The condition of the concrete in this area needs to be examined under low flow conditions; and
- 9. There is no operational procedure plan (O&M) on file with the DES.

DES Web site: www.des.nh.gov

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DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

June 1, 2004:

- 1. Remove the brush and tress along both right and left abutments of the dam and within 10 feet of the toe of the abutment walls;
- 2. Prepare and submit to the DES a written O&M plan. The plan should describe the control of impoundment levels, monitoring and maintenance procedures, and identify emergency contact personnel;

December 1, 2004:

- 3. Submit a report, as completed by an engineer experienced in the analysis of dams, to DES that includes the following:
 - a. A detailed structural assessment of the entire dam. A thorough inspection of the dam to support the assessment should be conducted under fully dewatered conditions;
 - b. DES analysis indicated that the dam can pass approximately 78% of the 30-year storm with water to the top of the dam and no operations. Compute the 50-year storm event and demonstrate that the dam is stable for the predicted overtopping from a 50-year storm event or propose modifications to the dam to increase the discharge capacity;
 - c. An investigation into and an assessment of the source of seepage/leakage that was noted in the following locations:
 - i. At the toe of the left concrete abutment wall;
 - ii. In the vicinity of the old penstock at the left abutment of the dam.
- 4. Remove the buildup of sediment on the upstream face of the dam such that the low level outlet is rendered operable; and

December 1, 2005:

5. Implement recommendations proposed as a result of the engineering study mentioned in item #3 above and as approved by DES.

In lieu of the above repair schedule the dam owner may elect dam removal. In this case the following schedule is recommended:

June 1, 2004:

1. Notify this office of an interest in pursuing dam removal. If you need assistance in this matter you can contact DES River Restoration Coordinator, Ms. Stephanie Lindloff at 271-3406.

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DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise. DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

As a result of our file review and inspection DES has reclassified the dam from a non-hazard class AA to a minimum-hazard class A structure. There is an annual \$100 dam registration fee associated with a class A dam. A dam safety inspection of the dam will be conducted every six years. The next scheduled inspection for this dam will be in 2009.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely.

Grace/E. Levergood, P.E. Dam Safety Engineer

Attachments Guideline for an O&M plan, DB8, DB13

cc: Gretchen Rule Town of Rochester

Stephanie Lindloff, River Restoration Coordinator tified # 1000 1670 0000 0585 9695

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Mill Pond Dam #204.01 Rochester, NH

